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Factors Influencing Customer Attitudes towards Online Food Delivery Application after the COVID-19 Epidemic in Jordanian Restaurants

Bashar M. AL NAJDAWI
Hotel Management and Tourism Science Department
Faculty of Aqaba College, Al-Balqa Applied University, Jordan
najdawi@bau.edu.jo

Mohammad KHASAWNEH
Department of Financial and Administrative Sciences
Faculty of Ajloun College, AL-Balqa Applied University, Jordan
khasawnehmohammad79@bau.edu.jo

Issam Mohammad AL-MAKHADMAH
Tourism Management Department
Ajloun College, Al-Balqa Applied University, Jordan
isammakhadmeh@bau.edu.jo

Hakam SHATNAWI
Hotel Management Department
Faculty of Tourism and Hotel Management, Yarmouk University, Jordan
Hakamss@yu.edu.jo

Qusay KHALEEFAH
Hotel Management and Tourism Science Department
Faculty of Aqaba College, Al-Balqa Applied University, Jordan
Q.khaleefa@bau.edu.jo

Ramzi AL ROUSAN
Department of Sustainable Tourism
Queen Rania Faculty of Tourism and Heritage, The Hashemite University, Jordan
ramzim@hu.edu.jo

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Abstract:

Although several studies on technology trends and acceptance have been undertaken, few studies investigate the factors that influence customer attitudes toward food delivery apps depending on the Unified Theory of Acceptance and Use of Technology (UTAUT). The purpose of the study is to examine the use of Online Food Delivery (OFD) in Jordanian restaurants after the COVID-19 epidemic by applying UTAUT. In the northern and central regions of Jordan, 722 online questionnaires were gathered using Structural Equation Modeling (SEM). The results reveal that three factors significantly affect customers' decisions to use the OFD service: behavioral intention, pricing, and social influence. Furthermore, performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit positivity, trust, and perceived credibility significantly influence the behavioral intention to use. In addition, the moderating impacts of age, gender, and experience were examined using multigroup analysis. Some of the model's expected associations were shown to be moderated by the users' experience, but gender and age had no significant influence. The results have consequences for both research and practice implications.

Keywords: perceived credibility; trust; UTAUT-2; Jordan; online food delivery.

JEL Classification: Q55; L66; R11; L83; Z32.

Introduction

The COVID-19 epidemic had a major impact on consumers' relationships with eating and food (Control & Prevention, 2020). Given the proliferation of COVID-19 epidemic, the primary methods employed to inhibit the COVID-19 form rapidly spreading aggressively were remain at home orders and social distancing. As argued by (Byrd *et al.* 2021), the concept of social distancing may be viewed as keeping a safe distance between oneself and non-household individuals. Due to this action and remain at home orders, numerous food services, namely restaurants and snack-bars, were closed. Consequently, a number of restaurants modified their business strategies to deal with the COVID-19 pandemic's difficulties (Cho *et al.* 2019). These modifications are made feasible by advancements and growth in online commerce, termed "online-to-offline" (O2O) (Gavilan *et al.* 2021). O2O deals with systems that enable users to purchase goods and services from physical businesses over the internet (Zhou *et al.* 2007, Liu *et al.* 2017).

OFD originated from the assumption of O2O. Apps for food delivery serve as a conduit between markets and restaurants and their customers, making it feasible for customers to obtain food at home. Consistent with social distance, both foodservice and customer service personnel avoid any physical interaction with one another. This kind of application is becoming more prevalent considering the benefits that come with using a service of this kind and the growing number of people who use smartphones (which surpassed five billion in 2019) (GSMA 2020).

Numerous researchers have conducted extensive studies on the subject of online purchasing behavior to gain a deep understanding of customer behavior in this field (Li and Mo 2015, Cho *et al.* 2019). Online services are popular with consumers for many reasons, such as their convenience, usefulness, utility, and others (Kimes 2011, Lan *et al.* 2016). Internet purchasing has allowed consumers to make fewer decisions by providing greater options to choose from, comparing products and screening information (Sethu and Saini 2016, Saad 2020).

Despite the fact that the majority of prior studies have focused on online purchasing behavior, there have been few studies conducted on the OFD industry (Ha 2013, Yeo *et al.* 2017). There is currently insufficient knowledge regarding customer behavior in FDO in the increasing Jordan market. Specifically, OFDs are still in their infancy in Jordan but have gained a lot of popularity in their initial phase.

This research adds to the existing body of knowledge by highlighting important success factors that drive online food purchases in developing countries, including Jordan. Jordan is one of the middle east countries that are rich in Tourist sites, Petra City as One of the Seven Wonders of the World 2007, Wadi Rum, and the Dead Sea. Moreover, it is concerned with the Tourism and Hospitality industry, especially culinary art and diverse restaurants after covid 19 pandemic, which helps that spread of food delivery applications that appeared in fast-food restaurants and local restaurants significantly (Al Najdawi *et al.* 2017, Mohammad*et al.*2014, Hakam Shatnaw *et. al.* 2019).

Hence, the study goal is to analyze the factors influencing consumers' use of OFD by using UTAUT2 and other factors, mainly trust and Perceived Credibility (PC), in order to offer an appropriate framework after the COVID-19 epidemic. The study presents a theoretical foundation for OFD and the foodservice sector after the COVID-19 epidemic by applying the UTAUT2.

1. Literature Review

Online Food Delivery

According to (Chen and Hsieh 2017), goods are defined as things, objects, or gadgets, whereas services are defined as activities, performances, or efforts. People's lives are becoming busier on a daily basis; they have fewer opportunities to dine out or prepare meals at home, which has led to an increase in the demand for OFD ordering (Pigatto *et al.* 2017). In light of the research conducted by (Hoffman *et al.* 2010), OFD is a business platform that offers payment, order services, and process monitoring but is not accountable for the meal preparation. Face-to-face connection is being replaced in online retail purchases by internet-based tools and mobile phone applications including chat, e-mail, and SMS, as well as business websites where consumers may search, find, and make orders (Saad 2020) Businesses that want to provide goods and services economically are using novel distribution techniques as a new foundation for differentiation and offering clients better value (Hirschberg *et al.* 2016). Consequently, (Chen *et al.* 2009) acknowledged that value creation is categorized as a procedure including the actions of numerous actors, beginning from the service supplier to the customer and others that end up creating value for the client.

Two categories of retailers offering meal delivery services may be distinguished. First, the retail sector is dominated by fast-food companies such as Kentucky Fried Chicken (KFC), Pizza Hut, McDonald's, Domino's

Pizza, and others. Second, several restaurant middlemen offer delivery services for a wide variety of eateries. There are several examples, including GrubHub, Food Panda, PathaoFood, UberEats, Room Service, and HungryNaki.

The industry of restaurants delivering meals to clients' homes is undergoing substantial transformation as new internet platforms compete to acquire markets and consumers worldwide. Yeo *et al.* (2017) state that the OFD systems give customers more options and make their lives easier by letting them order from a number of restaurants with a single swipe on their phones. Researchers have used the UTAUT-2 to OFD services to understand why consumers participate in a certain behavior, and other studies (Dsouza and Sharma 2020, Annaraud and Berezina 2020, Chai and Yat 2019) have expanded it to include other motives, such as customer satisfaction, service quality, social norms, food quality, and saving price while taking into account past experiences and moral commitments. Few scholars have expanded UTAUT-2 models by adding constructs to explain why people engage in a specific behavior (Tam 2020). For instance, (Zhao and Bacao 2020) expanded UTAUT-2 models by adding constructs to explore BIs to adopt Internet banking. Using a similar method, the study enhanced the UTAUT-2 models by adding constructs (trust and perceived credibility) in order to comprehend the drivers of individuals' decisions to adopt OFD.

Unified theory of acceptance and use of technology

In 2003, Venkatesh *et al.* created the UTAUT, then in 2012, Venkatesh *et al.* extended the UTAUT in order to cover a wider range of contexts. In its original form, the theory brought together eight diverse models to describe how users adopt and use technology based on four direct variables: Performance Expectancy (PE), Social Influence (SI), Facilitating Conditions (FC), and Effort Expectancy (EE). In contrast to the first theory, the subject of attention in UTAUT2 is the customer. Specific theories, as stated by Venkatesh *et al.* (2012), enable a deeper, comprehensive explanation of focused phenomena. Consequently, UTAUT2 adds three new factors, which are hedonic incentive, price, and habit, into the four original UTAUT categories to describe customer behavior (Hirschberg *et al.* 2016, Byrd *et al.* 2021). It is considered that the construction of UTAUT2, enlarged to include solidarity with the restaurant industry, may explain Jordan's determination to use OFD during the epidemic.

Performance expectancy (PE)

PE is the user's view of the performance advantage in a specific activity that a certain technology will provide. The first UTAUT2 component is referred to as "performance expectancy," and it describes the user's impression of the performance advantage in a certain activity that a specific technology will provide (Venkatesh *et al.* 2003). Consequently, this component plays a role in determining the level of interest a customer has in accepting modern technologies. People sense a shortage of time due to a combination of daily situations. Every conceivable amenity is an effort to reduce the amount of time spent on laborious and time-consuming activities (Zhao and Bacao 2020, Saksena *et al.* 2018) demonstrate that PE positively influences the OFD's continuation intent. Users of OFDs are more likely to continue utilizing this technology if they feel it to be of high usefulness. In other words, despite perceived performance benefits, several individuals experience difficulties in utilizing technology (Yeo *et al.* 2017). Alternatively, despite the apparent performance benefits of technology, many individuals struggle with its use (Roh and Park 2019).

Effort expectancy (EE)

The concept of "perceived ease of use" of a particular technology is known as EE (Venkatesh *et al.* 2003). This concept seems to have an important impact on technology app use (Zhou *et al.* 2014, Fang and Fang 2016). Several research have demonstrated that the elderly and older users have more difficulty utilizing digital technology, requiring additional time and make an effort to understand how to utilize smart-phone applications (Kang 2014). Despite this, digital technology is becoming more and more familiar among users. After the initial point of contact, the obstacles and challenges may not develop into an opposing driver of the purpose to use. In a epidemic, consumers are able to persevere in the face of challenges and keep using OFDs due to the perceived advantages they provide (Zhao and Bacao 2020).

Social influence (SI)

According to Venkatesh *et al.* (2003), the concept of SI is defined by an increase in the willingness of other individuals, such as members of one's friends, family, and coworkers, to adopt a certain technology. It seems that the adoption of certain technologies has an effect on social inclusion (Chopdar and Sivakumar 2019, Zhao and

Bacao 2020). Based on the findings of previous research, SI does seem to influence customers' intentions to continue utilizing technology applications (Hill *et al.* 2015, Wen *et al.* 2020). The COVID-19 epidemic has caused anxiety among families, friends, and loved ones, hence increasing the demand for separation (Fame-RN, 2020). Since using ODFs makes it harder to connect with other people (Lai and Shi 2015, Gavilan *et al.* 2021). SI must have a big effect on the desire to keep going during this time.

Facilitating conditions (FC)

Venkatesh *et al.* (2003) described FC as the degree to which a person believes that the application of technology is supported by an acceptable organizational and technological infrastructure. It relates to the collection of variables that increase the consumer's desire to use technology. Furthermore, the desire to continue using technology is influenced by the availability of resources such as money, time, internet connection, and cognitive and physical skills (Chopdar and Sivakumar 2019, Wen *et al.* 2020). UTAUT evaluates situations based on the existing technological information and resources that are deemed to be accessible (Luis *et al.* 2021).

Hedonic motivation (HM)

The concept of Hedonic Motivation (HM) evaluates the enjoyment or pleasure obtained from the use of technology. According to Venkatesh *et al.* (2012), these characteristics are crucial and essential for the adoption of technology. Despite this, consumers in the early phases of their experience are more influenced by HM (Luis *et al.* 2021). As a result of the epidemic, several customers have altered their food consumption practices. As a result, many people are still in the beginning stages of utilizing OFDs owing to directives to remain at home. As customers begin to use the technology for more utilitarian objectives, the influence of HM diminishes as their experience grows (Venkatesh *et al.* 2012, Nishi 2017).

Price value (PV)

According to Venkatesh *et al.* (2012), price is the monetary cost of acquiring and using a thing, whereas value is an abstract concept that varies depending on the situation. The expenses of using technology are borne by consumers, either directly when purchasing an application or indirectly in the case of OFDs (Tam *et al.* 2020). The OFD's most widely utilized and popular firm in Jordan charges 10% fees to food sellers as well as consumers, who are responsible for paying this cost (Food 2020). On the other hand, numerous retailers utilizing the FDA could provide food at reasonable costs because of the FDA's incentives, greater sales, and reduction in operational expenditures like government taxes, rent, and workers (Tam *et al.* 2020). Therefore, the Price Value (PV) has an influence on the continuing intention when the customer recognizes that the advantages outweigh the price of the product (Venkatesh *et al.* 2012, Tandon *et al.* 2021).

Habit positively

A habit is described as an automatic behavior that results from repeated encounters with people, places, or events. Instead of being refined by choice processes, routine behaviors are governed by automated cognitive processes (Nascimento *et al.* 2018). Additionally, familiarity with the technology influences the effect of habit on the desire to continue; that is, the individual's intention to continue grows as he or she gets more acquainted with a specific technology (Tandon *et al.* 2021). The function of habit in continuation intention has been investigated in several circumstances, including e-commerce, e-shopping, and smartwatch use (Chopdar and Sivakumar 2019, Yan *et al.* 2021). Habit is classed as a behavioral component, and in this case, it refers to the frequency and history of a certain technology's use (Nascimento *et al.* 2018). In general, the frequency of technology usage decreases with age (Venkatesh *et al.* 2012). Even when continuous usage becomes a habit, older individuals have trouble adjusting to a new environment, repressing new learning (Statista Research Department 2021, Simform 2021).

Trust

Safety is one of the primary deterrent reasons why numerous consumers are hesitant to purchase online. Trust may be defined as the consumer's views about the safety of retailers and internet technology (Davis 1989). In prior research, perceived risk was seen as a separate factor from trust, and the relationship between these two factors was investigated (Venkatesh *et al.* 2012). Despite this, they are conceptually highly similar but in opposing directions. Customers' perceptions of risk are often described as their anticipation of likely losses or other adverse consequences. Both the transaction and the supplier itself are seen negatively (Davis 1989 and Ajzen 1991). Furthermore, trust is defined as a mix of the reliability of both the transaction and the vendor, a feeling of security

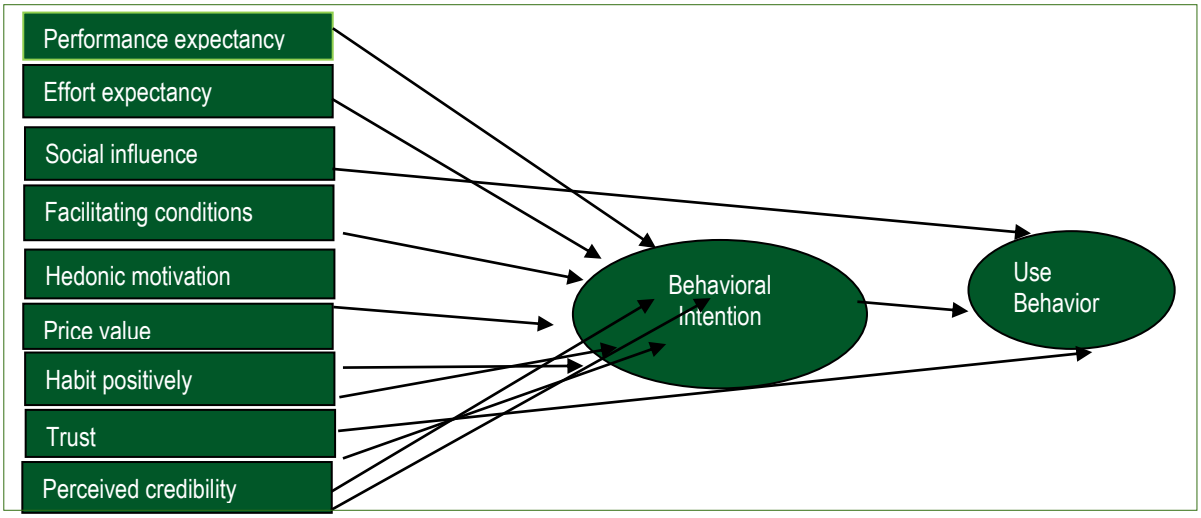
and confidence in online transactions, or a set of precise ideas about the vendor's reliability (Hill *et al.* 2015, Cho *et al.* 2019, Zhao and Bacao 2020). Hence, trust and perceived risk may be handled as replacement variables with minor modifications (Tam *et al.* 2020). In this research, the researchers use a broad definition of trust that includes perceived risk (Tandon *et al.* 2021).

Perceived credibility (PC)

PC is the degree to which a person feels that using mobile technology will not pose any privacy or security risks (Luam and Lin 2005, Goh and Sun 2014). In fact, it is common knowledge that customers are worried about transaction risks privacy, and security in the mobile environment and that resolving these concerns is crucial for mobile ecosystem adoption (Lu, Yang *et al.* 2011). Hence, determining the impact of PC on OFD adoption intentions is crucial. In the mobile context, PC is assessed along two factors: security and privacy/confidentiality (Laforest and Li 2005). As a result, in the OFD environment, the individual does not make a purchase but rather conducts a search or makes a reservation. Thus, the traits of the trustee, such as kindness and honesty, which work as trust producers in the offline setting, are not applicable in the mobile context because of the nature of the technology (Gavilan *et al.* 2021). Only the application management expertise, which may be interpreted as privacy, is relevant inside the OFD framework (Byrd *et al.* 2021). Even though PC has been studied with regard to mobile banking, however with OFD people it has been studied very little as well as it does not appear on the list of factors that are measured by the UTAUT2.

Consequently, this study's research incorporates PC to enhance the explanation of intentions to utilize OFD, as supported by the direct positive association established by Yu (2012) utilizing UTAUT among mobile-banking users. This research adds trust and PC in order to further explain the intent to use OFD, as supported by the direct positive association established by Yu (2012) utilizing UTAUT with a cross-section of Taiwanese mobile bank customers. On the other hand, trust and PC have received very little attention in UTAUT-2. Various theories describe the intention to utilize the OFD (Ray *et al.* 2019, Lee *et al.* 2019). Nevertheless, according to prior research, UTAUT is a significant and well-known theory for explaining the usage of information systems and applications (Jadil *et al.* 2021, Song *et al.* 2021). It is predicted that the UTAUT1 variables will predict the continuation intent of FDAs in Jordan after the COVID-19 epidemic. The UTAUT-2 was expanded by including solidarity with trust and PC. This study's hypotheses are illustrated in Figure 1.

Figure 1. The study models



2. Methodology

The items of a questionnaire were derived from a previous literature study. The questionnaire was divided into two parts. The first part of the survey consisted of three questions that probed the respondents' demographic background, including their ages, genders, and experience. The second part consisted of 42 questions about the primary structures included in the developed framework.

Original elements from Venkatesh *et al.* (2012) were converted to the mobile app model to generate scales for usage, intention to use, performance expectation, EE, enabling circumstances, hedonic incentives, and habit. The trust factor was evaluated using four items from Chen and Hsieh (2017). Based on the research of Yu (2012), four items were used to evaluate PC. Finally, the experience was evaluated by the number of years spent

using mobile apps. A pilot study consisting of twenty-five participants was carried out in order to assess the clarity of the questionnaires and the amount of time needed to respond (15 min). For the second part of the survey, a five-point Likert scale was used, with 1 being "strongly disagree" and 5 being "strongly agree".

3. Research Framework and Data Collection

The sampling was constructed utilizing a non-probabilistic sampling technique with proportionate demographic characteristics quotas from the population, and it consisted of Jordanian people who possessed a smartphone and used OFD. The quota size needed to achieve a representative sample of the various demographics of the population was fixed.

To satisfy the goals of the predetermined quotas, a non-random approach was adopted to identify the respondents. The online Google Forms were used in the collection of the data. Customers were invited using platforms such as WhatsApp, Facebook, and Instagram, which is a professional research market agency. A sample of 722 participants was collected between March 13, 2021, and March 25, 2022. Males and females were both represented for 50% of the total. While 18.1% were between the ages of 18 and 25, 27.9% were between the ages of 26 and 35, 38.7% were between the ages of 36 and 45, 23.5% were between the ages of 46 and 55, and 8.3% were aged 56 or over. The majority of respondents had three years of experience (67%), followed by 33% of respondents having less than three years of experience.

To evaluate the research objectives of this study, the researchers used latent variable SEM. The framework was derived from the matrices of covariances and variances, utilizing the maximum likelihood estimation method with the EQS statistical programme (Lee *et al.* 2019). A test of the dimensionality, reliability, and validity scales was used to confirm that the evaluated construct corresponded to the intended one. Composite measurements are combinations of elements employed to generate score aggregates, which are then submitted to confirmatory factor analysis (CFA) together with the other scales included in the suggested model to verify their validity. For different reasons, composite measurements are important in a CFA. First, they improve maximum likelihood estimation's normal-distribution assumption. Next, they provide more parsimonious models by minimizing the amount of covariances and variances that must be estimated, subsequently improving parameter estimation accuracy, increasing the variable to sample size ratio, and reducing the influence of sample error on the estimation procedure. As a consequence of this, a composite measure of each aspect was included in the studies that were carried out in order to evaluate the dimensionality, reliability, and validity of the scales. Finally, the causal links necessary to evaluate the conceptual framework were identified.

4. Findings and Results

Two approaches were employed to evaluate the popular approach bias. Firstly, The Harman single factor analysis was conducted, and the findings indicated that 45.84% of the variance is described; therefore, there is no significant common method bias. Next, applying EQS, we defined an approach factor alongside the original latent factors and computed the squared factor loadings for both the approach variable and the substantive variables. The variation explained by the substantive components was more than 0.70, but the variance explained by the technique component was less than 0.017, indicating that the common approach bias is not an issue in this research (Hair *et al.* 1995).

Table 1. Analysis of the dimensionality, reliability, and validity

Criteria	Factor loading	*t*
Use (AVE = 0.85; CR = 0.89)		
Use1	0.81	21.20 **
Intentions to use (AVE = 0.84; CR = 0.91)		
IU1	0.89	40.69 **
IU2	0.83	35.18 **
IU3	0.87	35.24
IU4	0.78	39.12
PE (AVE = 0.70; CR = 0.90)		
PE1	0.77	30.38
PE2	0.74	34.82
PE3	0.75	32.91
EE (AVE = 0.75; CR = 0.92)		
EE1	0.79	36.15
EE2	0.85	33.13

Criteria	Factor loading	*t*
EE3	0.88	40.11
FC (AVE = 0.69; CR = 0.87)		
FC1	0.74	27.18
FC2	0.77	22.32
FC3	0.80	24.71
FC4	0.80	29.54
HM (AVE = 0.79; CR = 0.88)		
HM1	0.82	34.65
HM2	0.74	31.24
HM3	0.90	38.14
PV (AVE = 0.65; CR = 0.83)		
PV1	0.86	35.51
PV2	0.82	33.50
PV3	0.84	31.23
HP (AVE = 0.72; CR = 0.88)		
HP1	0.85	34.26
HP2	0.77	26.77
HP3	0.72	25.76
HP4	0.81	71.67
SI (AVE = 0.75; CR = 0.89)		
SI1	0.76	28.87
SI2	0.83	34.59
SI3	0.73	36.76
PC (AVE = 0.79; CR = 0.93)		
PC1	0.76	26.71
PC2	0.85	34.22
PC3	0.80	29.33
PC4	0.86	22.35
PC5	0.82	38.18
Trust (AVE = 0.81; CR = 0.87)		
T1	0.90	44.25
T2	0.87	45.13
T3	0.87	42.23
T4	0.84	33.25
T5	0.79	38.27

Table 2. Correlations and discriminant validity

	Use	Intentions	Perfor-mance	Effort	Facilitating	Hedonic	Price	Habit	Social	Credibility	Trust
Use	0.82										
Intentions	0.49 **	0.88									
Performance	0.73 **	0.73 **	0.87								
Effort	0.63 **	0.76 **	0.78 **	0.80							
Facilitating	0.66 **	0.77 **	0.64 **	0.69**	0.87						
Hedonic	0.56 **	0.64**	0.69 **	0.76 **	0.56 **	0.89					
Price	0.61 **	0.60 **	0.53 **	0.45 **	0.58 **	0.65 **	0.79				
Habit	0.39 **	0.68 **	0.54 **	0.44 **	0.47 **	0.66 **	0.54 **	0.86			
Social	0.33 **	0.77 **	0.70 **	0.55 **	0.70 **	0.75 **	0.65 **	0.77 **	0.85		
Credibility	0.59 **	0.75 **	0.48	0.67 **	0.29 **	0.73 **	0.38 **	0.79 **	0.69 **	0.85	
Trust	0.71 **	0.65 **	0.52	0.53 **	0.32 **	0.55 **	0.24 **	0.80 **	0.53 **	0.44 **	0.81

To examine for multicollinearity, the variance inflation factors (VIFs) were determined to have a minimum value of 2.012 and a maximum value of 4.137, both of which are less than the conservative threshold of 5, indicating that multicollinearity was not a significant concern in this research. Once composite measures were generated from items on the social impact scale that shared the same dimension, the psychometric features of the scales constituting the model were examined. The chi-square probability is above 0.05 (0.29855), suggesting an acceptable scale fit. Convergent validity is established since the factor loadings are statistically significant and

more than 0.5, and the AVE for each factor is greater than 0.5, with values ranging from 0.65 to 0.88. The factor loadings are substantial and above 0.5, and the AVE for each factor is over 0.5, ranging from 0.83 to 0.93. Moreover, CR indices for all factors are over 0.8, as shown in Table 1.

Using the same criterion, Table 2 displays the discriminant validity of the studied constructs.

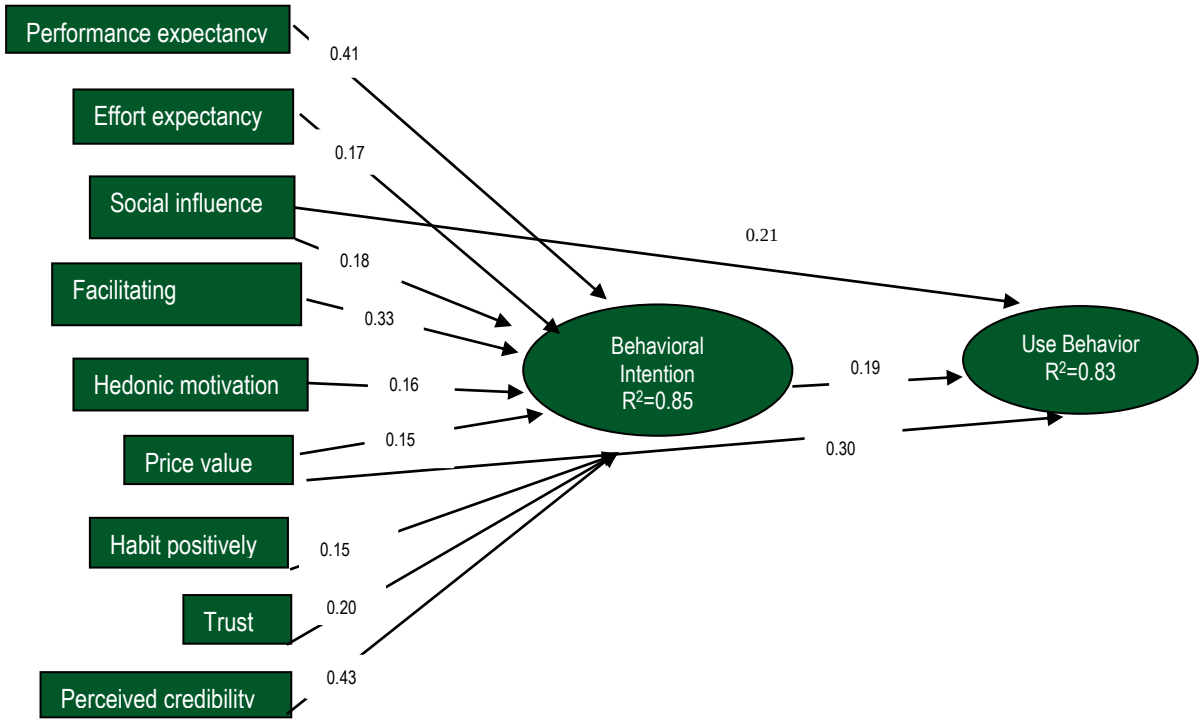
4.1. Structural Model Results

To test hypotheses, the general causal links of the suggested model were examined (Table 3). The chi-square probability was more than 0.05 (0.07351), the comparative fit index (CFI) was quite near to unity (0.884), and the root mean square error of approximation (RMSEA) was relatively close to zero (0.011). Furthermore, the diversity in behavioral intentions (R2 = 0.85) was described by PE, EE, SI, FC, HM, PV, Habit Positively (HP), trust, and PC. The variation in user behavior (R2 = 0.83) was described by behavioral intentions, PV, and SI. This demonstrates that the model used in this research can accurately predict and explain the utilization and uptake of OFD. The restricted model is more accurate based on a comparison of the chi-square values of both models, which provided X2 = 225.87 with df = 8 and p = 0.000.

Table 3. Structural Equation Modeling (SEM) results

H	Path	Path Coefficient	t
H1	PE ----- Intentions to use	0.41	8.91**
H2	EE --- Intentions to use	0.17	7.91**
H3	SI --- Intentions to use	0.18	7.89**
H4	FC --- Intentions to use	0.33	37.88**
H5	HM --- Intentions to use	0.16	36.78**
H6	PV --- Intentions to use	0.15	36.78**
H7	HP --- Intentions to use	0.15	26.81**
H8	Trust --- Intentions to use	0.20	36.82**
H9	PC --- Intentions to use	0.43	7.89**
H10	SI ---- Use	0.21	35.91**
H11	PV --- Use	0.30	35.71**
H11	Intentions to use --- Use	0.19	36.82**

Figure 2. Structural model results



According to the findings of this study, behavioral intention, price, and SI all had a significant impact on usage (= 0.19, p 0.000; = 0.30, p 0.000; = 0.21, p 0.000). Furthermore, PE, EE, SI, FC, HM, PV, HP, trust and PC significantly influence the behavioral intention to use (β = 0.41, p < 0.000; β = 0.17, p < 0.000; β = 0.18, p <

0.000; β = 0.33, p < 0.000; β = 0.16, p < 0.000; β = 0.15, p < 0.000; β = 0.15, p < 0.000; β = 0.20, p < 0.000; β = 0.43, p < 0.000) as shown in Table 3 and Figure 2.

4.2. The Moderating Effects Analysis

A moderation analysis was utilized to examine the model's validity. Table 6 displays the moderating impact of gender (male vs female), age (18 to 40 vs 41 or older), and experience utilizing mobile apps (less than 4 years versus more than 4 years) on the model's associations. Previously, the invariance of the factor loadings was confirmed for each moderator analysis. In all three situations, the model fit was not considerably lower in the model with reduced factor loadings (always, the probability associated with the rise in chi-square is greater than 0.05, p = 0.178 for gender, p = 0.189 for age, and p = 0.195 for experience).

Table 4. Results of moderating effects

Path	Gender		Age		Experience	
	Men	Women	18–40	Over 41	4 years or less	More than 4 years
PE → Intentions to use	0.34	0.37	0.41	0.41	0.35	0.43
EE → Intentions to use	0.15	0.15	0.15	0.15	0.15	0.15
SI → Intentions to use	0.15	0.11	0.11	0.11	0.12	0.13
FC → Intentions to use	0.50	0.51	0.49	0.44	0. 48	**0.54****
HM → Intentions to use	0.10	0.10	0.19	0.19	0.18	0.10
PV → Intentions to use	0.16	0.16	0.16	0.16	0.16	0.17
Habit → Intentions to use	0.37	0.37	0.37	0.38	0.38	**0.48****
Trust → Intentions to use	0.19	0.19	0.20	0.18	0.18	0.21
PC → Intentions to use	0.38	0.38	0.39	0.36	0.36	**0.55****
SI → Use	0.13	0.13	0.12	0.12	0.13	0.13
PV → Use	0.22	0.22	0.22	0.23	0.23	0.23
Intentions to use → Use	0.49	0.48	0.49	0.49	0.48	0.49

The results of Table 4 indicate that neither gender and age moderated the impact of the independent factors on intentions to utilize OFD. According to the outcome of the study, only mobile app experience moderated PC (0.45 vs. 0.55), hedonic (0.25 vs. 0.36), and FC (0.35 vs. 0.47) on the use of OFD. This impact was stronger among mobile application consumers with more experience. Consequently, PE, EE, SI, motivation, PV, HP, and trust are all rejected.

5. Discussion and Conclusion

This study has created a comprehensive framework for a restaurant app by expanding and enhancing UTAUT-2. The results significantly indicate the applicability of the extended and enlarged UTAUT-2 as a guide for understanding the aspects involved in restaurant patrons' adoption of mobile apps.

Additionally, this study explored the moderating impact of experience, gender, and age, which were marginally supported. This study is one of the initial empirical pieces of evidence to be assessed to investigate the uptake of restaurant apps by customers. Furthermore, PC, PE, trust, EE, SI, HM, PV, FC, and HP and significantly influence the behavioral intention to use. These findings mostly indicate that consumers will have favorable attitudes towards implementing OFD due to it is enjoyable, interesting, and simple to use, and it saves time and money. In addition, the findings indicate that behavioral intention, price, and SI all have a significant impact on usage. This is in line with prior research on UTAUT-2, which found similar results (Control & Prevention 2020, Simform 2021).

The desire to use a restaurant app may be less important when the habit is greater, as the possibility of using it continually is higher, as evidenced by the large effect of habit on OFD usage. This validates a prior study among internet users that demonstrated a direct influence of habit on technology usage but a minor impact on intentions to use it (Sethu and Saini 2016). The age and gender moderating effects did not reveal any significant differences (UTAUT-2), corroborating the findings of prior research (Chopdar and Sivakumar 2019). This study revealed substantial variations in the moderating influence of mobile application experience among enabling conditions, intentions to use, habit and use of OFD, which is partly confirmed by other research (Control and Prevention 2020, Byrd *et al.* 2021).

The biggest predictor of intentions to use is PC, which suggests that privacy concerns are still present while utilizing OFD, as they often are in the early phases of new technologies' adoption. In the OFD context, privacy is not just an issue of statutory compliance, but also of business practice and developing a technology

solution to meet customer needs. Thus, PC is an additional relevant antecedent of intentions to use in the setting of OFD, which is congruent with the results of prior research in UTAUT1 (Yu 2012). These findings indicate the necessity to include the trust and PC components into UTAUT2 in order to get a deeper understanding of the acceptance of OFD based on the suggested model. After the COVID-19 epidemic, when contactless delivery was important and required, consumers' desire to utilize an online food service was greatly influenced by their level of trust. In conclusion, an enhanced and enlarged version of UTAUT2 was used in this study to explain the user acceptability of restaurant mobile applications. This has substantially improved the variability of the intention to use (R2 = 0.85) and utilization (R2 = 0.83) compared to past research (Control and Prevention 2020, Jadi *et al.* 2021).

Theoretical implications

The purpose of the research was to uncover elements crucial to the success of OFD businesses. Understanding the customer environment more thoroughly will aid in realizing the e-commerce platform's full potential, which has the capacity to affect the economy, companies, and the quality of life for individuals. The Internet has affected people's lives in a variety of ways, including giving access to education and information, fostering entrepreneurship, establishing new markets, and decreasing poverty and income disparity. The Internet has successfully assisted businesses in reducing costs, enhancing efficiency, influencing recurring consumer purchases, fostering customer loyalty, gaining a larger market share, and increasing profits. These benefits may serve as strategic competitiveness instruments. This study adds to the present body of knowledge by having several theoretical implications. The current research first established and presented actual proof that the UTAUT-2 model was effective in OFD services after the COVID-19 epidemic. The research contributed to the literature on the use of technology in emergency situations, particularly during epidemics. This research presents a theoretical foundation for OFD literature in light of increased rivalry in the foodservice sector and increasing difficulties for businesses in contacting clients during the epidemic.

The UTAUT-2 was then used to investigate potential client behavior intentions to use online meal delivery services. It is believed that the UTAUT-2 model with the additional components (*i.e.*, pleasure, trust, and social impact) has more explanatory power than the traditional UTAUT model. The outcomes of this research reflect an important intellectual contribution to OFD services. Hence, this research sought to develop a complete model for understanding clients' use of OFD services. Understanding the consumer environment more thoroughly will aid in realizing the full potential of the e-commerce platform, which has the capacity to affect the economy, companies, and the quality of life for individuals. The Internet and e-commerce have affected the lives of people in a variety of ways, including giving access to education and information, fostering entrepreneurship, establishing new markets, and decreasing poverty and income disparity. The Internet has successfully assisted businesses in reducing costs, enhancing efficiency, influencing recurring consumer purchases, fostering customer loyalty, gaining a larger market share, and increasing profits. These benefits may serve as strategic competitiveness instruments.

Limitations and future research

There are two primary limitations to this research. Firstly, due to the present state of the epidemic, the research was carried out utilizing an online method. Online research restricts the involvement of individuals with limited access to the internet or technology or those with limited financial resources. It's possible that outcome of the study is really necessary for enhancing access to and use of OFD in Jordan. Responses may vary depending on the consumer's primary app, particularly for characteristics such as effort expectation, HM, and PV. These applications might be the subject of new research that measures their popularity, intent to use, and the causes of UTAUT.

Future studies should examine COVID-19's risk perception. An excessively hopeful customer may overlook safety measures even if delivery contamination risk is negligible. Future study may incorporate marginal benefit framework analyzing for more specific conclusions. The study advises a larger sample size in terms of age, employment, and workplace type. It is possible to do further research to assess variances in customer preferences among demographic groupings. Regular online meal ordering consumers and industry specialists might be surveyed qualitatively to determine the characteristics that are most important to them and will contribute to the development of the sector. Additional research may be conducted on aspects such as app or website usability, payment mechanism, and security.

References

[1] Ajzen, I. 1991. The theory of planned behavior. *Organizational behavior and human decision processes,* 50(2): 179-211. DOI: https://doi.org/10.1016/0749-5978(91)90020-T

[2] Al Najdawi, B. M., Khaleefah, Q. Q., Shatnawi, H. S., and Al Momani, E. M. 2017. Measuring local tourists' perceptions in Petra city as one of seven wonders of world. *Journal of Environmental Management & Tourism,* Volume VIII, Summer, (2 (18): 427. DOI: https://doi.org/10.14505//jemt.v8.2(18).15

[3] Byrd, Her, Fan, Almanza, and Liu. 2021. Restaurants and COVID-19: What are consumers' risk perceptions about restaurant food and its packaging during the pandemic? *International Journal of Hospitality Management*, 94, DOI: https://doi.org/10.1016/j.ijhm.2020.102821

[4] Chen, H., and Hsieh, Y. 2017. The driving success factors of the online food ordering system empirical evidence from the UTAUT model.

[5] Chen, J. S., Tsou, T. H., and Huang, A. Y. 2009. Service delivery innovation: Antecedents and impact on firm performance, *Journal of Service Research*, 12 (1): 36-55. DOI: https://doi.org/10.1177/1094670509338619

[6] Cho, Bonn, and Li. 2019. Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, 77: 108–116. DOI:https://doi.org/10.1016/ j.ijhm.2018

[7] Chopdar, P. K., and Sivakumar, J. P. 2019. Understanding continuance usage of mobileshopping applications in India: The role of espoused cultural values and perceived risk. *Behaviour & Information Technology*, 38(1): 42–64. DOI: https://doi.org/10.1080/0144929X.2018.1513563

[8] Davis, F. D. 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology*, MIS Quarterly*, 13(3): 319—339. DOI: 10.2307/249008

[9] Fame RN. 2020. The COVID-19 Pandemic: A family affair. *Journal of Family Nursing*, 26(2): 87–89. DOI:https://doi.org/10.1177/1074840720920883

[10] Fang, I. C., and Fang, S. C. 2016. Factors affecting consumer stickiness to continue using mobile applications. *International Journal of Mobile Communications,* 14(5), 431. DOI:https://doi.org/10.1504/IJMC.2016.078720

[11] Gavilan, D., Balderas-Cejudo, A., and Fern´andez-Lores. 2021. INNOVATION in online food delivery: Learnings from COVID-19. *International Journal of Gastronomy and Food Science*, 100330. DOI:https://doi.org/10.1016/ j.ijgfs.2021.100330

[12] Goh, T., and Sun, S. 2014. Exploring gender differences in Islamic mobile banking acceptance. *Electron. Commer. Research.*14 (4): 435–458. DOI: 10.1007/s10660-014-9150-7

[13] Ha, D. N. 2013. *Demand creation of online services for B2B and consumer market–food delivery in Vietnam,* M.Sc. Thesis, Tampere University of Technology.

[14] Hair J. F., *et al.* 1995. *Multivariate data analysis with readings,* 4th edition, Pearson College Div; 4th Edition, ISBN: 978-0139133107

[15] Hill, R., Betts, L., and Gardner, S. 2015. Older adults' experiences and perceptions of digital technology: (Dis)empowerment, wellbeing, and inclusion. *Computers in Human Behavior*, 48: 415–423. DOI:https://doi.org/ 10.1016/j.chb.2015.01.062

[16] Hirschberg, C., Rajko, H., Schumacher, A., and Wrul, T. 2016. *The changing market for food delivery*. Available at: https://www.mckinsey.com/industries/high-tech/our-insights/thechanging-market-for-food-delivery

[17] Hoffman, K. D., Bateson, E. J., and Ikeda, A.A. 2010. *Princiipios de marketing de serviços*, 3rd Ed., Cengage Sao Paulo, 599 pp.

[18] Jadi, Rana, and Dwivedi. 2021. A meta-analysis of the UTAUT model in the mobile banking literature: The moderating role of sample size and culture. *Journal of Business Research*, 132: 354–372. DOI:https://doi.org/10.1016/ j.jbusres.2021.04.052

[19] Kang, S. 2014. Factors influencing intention of mobile application use. *International Journal of Mobile Communications,* 12: 360–379. DOI: https://doi.org/10.1504/IJMC.2014.063653

[20] Laforet, A., and Li, X. 2005. Consumers' attitudes towards online and mobile banking in China. *International. Journal Bank Marketing,* 23(5): 362–380.

[21] Lai, I., and Shi, G. 2015. The impact of privacy concerns on the intention for continued use of an integrated mobile instant messaging and social network platform. *International Journal of Mobile Communications*, 13: 641–669. DOI: https://doi.org/10.1504/IJMC.20

[22] Lan, Yanan, and Shuhua. 2016. Improvement of online food delivery service based on consumers' negative comments, *Canadian Social Science*, 12 (5): 84-88.

[23] Lee, S., Sung, H., and Jeon, H. M. 2019. Determinants of continuous intention on food delivery apps: Extending UTAUT2 with Information Quality. *Sustainability*, 11(11): 3141. DOI:https://doi.org/10.3390/su11113141.

[24] LI, and Mo. 2015. The O2O mode in electronic commerce. *Proceedings of the International Conference on Education, Management, Commerce and Society*, 17: 238–241. DOI: https://doi.org/10.2991/emcs-15.2015.50

[25] Liu, Xiao, Lim, and Tan. 2017. The art of appeal in electronic commerce: Understanding the impact of product and website quality on online purchases. *Internet Research*, 27(4): 752–771. DOI:https://doi.org/10.1108/IntR-09-2016-0280

[26] Lu, Y., Yang, E., Chau, S., and Cao, Y. 2011. Dynamics between the trust transfer process and intention to use mobile payment services: A cross-environment perspective. *Information & Management,* 48: (8): 393–403. DOI: https://doi.org/10.1016/j.im.2011.09.006

[27] Luarn, P., and Lin, H. 2005. Toward an understanding of the behavioral intention to use mobile banking. *Computers in Human Behavoir.* 21(6): 873–891. DOI: https://doi.org/10.1016/j.chb.2004.03.003

[28] Luis *et al.* 2021. The use of food delivery apps during the COVID-19 pandemic in Brazil: The role of solidarity, perceived risk, and regional aspects. *Food Research International, 149: 110671*. DOI:https://doi.org/10.1016/j.food res.2021.110671

[29] Mohammad, A. R. A. F., Al Najdawi, B. M., ElZoghbi, M., and Abdelhadi, A. S. A. 2014. A study of some factors affecting employee turnover in fast food restaurant in Amman. *Journal of Association of Arab Universities for Tourism and Hospitality*, 11(1): 71-80.

[30] Nascimento, B., Oliveira, C., and Tam, C. 2018. Wearable technology: What explains continuance intention in smartwatches? *Journal of Retailing and Consumer Services,* 43: 157–169. DOI:https://doi.org/10.1016/j.jretconser. 2018.03.017

[31] Pigatto, Machado, and Negreti. 2017. Have you chosen your request? Analysis of online food delivery companies in Brazil, *British Food Journal*, 119(3): 639-657. DOI: https://doi.org/10.1108/bfj-05-2016-0207

[32] Ray, A., Dhir, A., Bala, P., and Kaur, P. 2019. Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *Journal of Retailing and Consumer Services*, 51: 221–230. DOI:https://doi.org/10.1016/j.jretconser.2019.05.025

[33] Roh, M., and Park, K. 2019. Adoption of O2O food delivery services in South Korea: The moderating role of moral obligation in meal preparation. *International Journal of Information Management*, 47: 262–273. DOI:https://doi.org/10.1016/j.ijinfomgt.2018.09.017

[34] Saad, A. T. 2020. Factors affecting online food delivery service in Bangladesh:an empirical study. *British Food Journal, 11*(5): 1-16. DOI: https://doi.org/10.1108/BFJ-05-2020-0449

[35] Saksena, M., Okrent, Y., Anekwe, T., and Cho, A. 2018. America's eating habits: Food away from home, *Economic Research Service Economic Information Bulletin* No. (EIB-196) 172 pp.

[36] Sethu, H. S., and Saini, B. 2016. *Proceedings of the seventh Asia-Pacific conference on global business,* Economics, Finance and Social Sciences (AP16 Malaysia Conference), Kuala Lumpur,15th – 17th July 2016. Paper ID: KL631. ISBN 978-1-943579-81-5

[37] Shatnawi, H., Al Najdawi, B., Kanaan, K., Khaleefah, Q., and Khasawneh, M. 2019. Factors affecting customers'behavior towards tipping intentions in Jordanian restaurants. *Geojournal of Tourism and Geosites*, 26(3): 761-768. DOI: https://doi.org/10.30892/gtg.26307-395

[38] Song, Ruan, and Jeon. 2021. An integrated approach to the purchase decision-making process of food-delivery apps: Focusing on the TAM and AIDA models. *International Journal of Hospitality Management,* 95: 102943. DOI: https://doi.org/10.1016/j.ijhm.2021.102943

[39] Tam, C., Santos, A., and Oliveira, T. 2020. Exploring the influential factors of continuance intention to use mobile Apps: Extending the expectation confirmation model. *Information Systems Frontiers*, 22(1): 243–257. DOI: https://doi.org/10.1007/s10796-018-9864-

[40] Tandon, A., Kaur, P., Bhatt, P., and Antym, M. 2021. Why do people purchase from food delivery apps? A consumer value perspective. *Journal of Retailing and Consumer Services*, 63: 102667. DOI:https://doi.org/10.1016/j.jretconser.2021.102667

[41] Venkatesh, V., Morris, M. G., Davis, G. B., and Davis, S. 2003. User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 7(3): 425–478. DOI: https://doi.org/10.2307/30036540

[42] Venkatesh, V., Thong, J., and Xu, X. 2012. Consumer acceptance and use of information technology: extending the unified theory. *MIS Quarterly*, 36 (1): 157–178. DOI: https://doi.org/10.2307/41410412

[43] Wen, J., Yang, F., Kozak, S., and Liu, F. 2020. COVID-19: Potential effects on Chinese citizens' lifestyle and travel. *Tourism Review*, 76(1): 74–87. DOI: https://doi.org/10.1108/TR-03-2020-0110.

[44] Yan, M., Filieri, R., and Gorton, M. 2021. Continuance intention of online technologies: A systematic literature review. *International Journal of Information Management*, 58(6): 102315. DOI:https://doi.org/10.1016/j.ijinfomgt. 2021.102315

[45] Yeo, V., Goh, S. K., and Rezaei, S. 2017. Consumer experiences, attitude and behavioral intentiontoward online food delivery (OFD) services, *Journal of Retailing and Consumer Services*, 35: 150-162. DOI:https://doi.org/10.1016/ j.jretconser.2016.12.013

[46] Yu, S. C. 2012. Factors affecting individuals to adopt mobile banking: Empirical evidence from the UTAUT Model. *Journal of Electronic Commerce Research,*13 (2): 104–121.

[47] Zhao, R., and Bacao, F. 2020. What factors determining customer continuingly using food delivery apps during 2019 novel coronavirus pandemic period? *International Journal of Hospitality Management*, 91: 102683. DOI: https://doi.org/10.1016/j.ijhm.2020.102683

[48] Zhou, Rau, and Salvendy. 2014. Age-related difference in the use of mobile phones. *Universal Access in the Information Society,* 13(4): 401–413. DOI: https://doi.org/10.1007/s10209-013-0324-1

[49] Control, D., & Prevention. 2020. *Social distancing. what is social distancing?* Available at: https://www.cdc.gov/coronavirus/2019 ncov/prevent-gettingsick/

[50] GSMA. 2020.*The mobile economy*. Available at: https://www.gsma.com/mobileeconomy/wpcontent/uploads/2020/03/GSMA_ MobileEconomy2020_Global.pdf

[51] Food. 2020. *Comoe a relaçao do iFood com os restaurantes? Transparencia*. Available at: https://institucional.i food.com.br/abrindo-a-cozinha/ifood-restaurantes

[52] Simform. 2021. App usage statistics 2021 that'll Surprise You (Updated). Mobile App Development. Available at: https://www.simform.com/the-state-of-mobile-app-usage/

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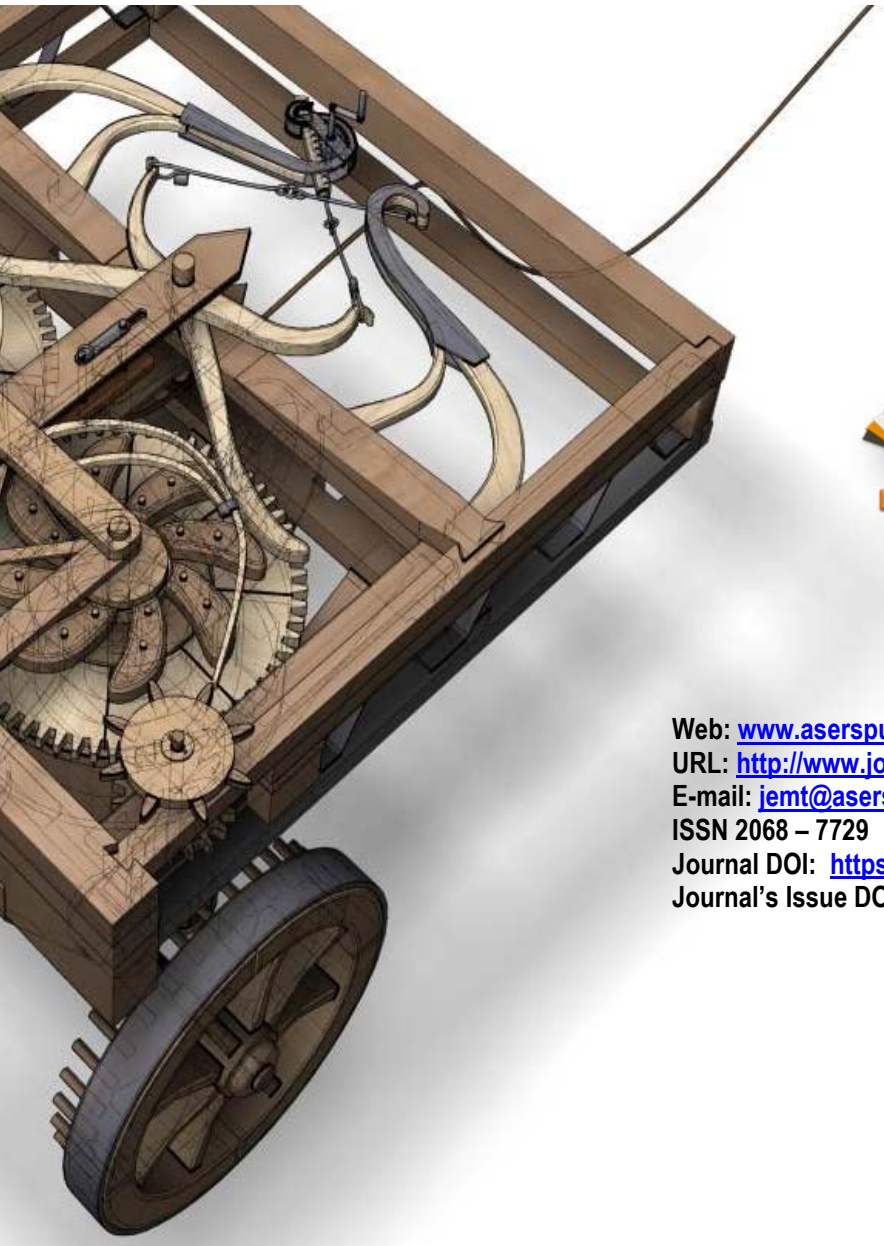

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